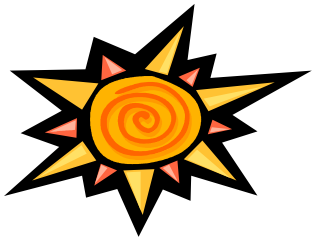


Winter Solstice and the Night Sky

The winter solstice marks the shortest day and the longest night of the year. The sun appears at its lowest point in the sky, and its noontime elevation appears to be the same for several days before and after the solstice. Hence the origin of the word solstice, which comes from Latin solstitium, from sol, "sun" and -stitium, "a stoppage." Following the winter solstice, the days begin to grow longer and the nights shorter

From Infoplease
http://www.infoplease.com/spot/wintersolstice1.html

Websites You May Want to Visit

InfoPlease
http://www.infoplease.com/spot/wintersolstice1.html

The Winter Solstice
http://www.equinox-and-solstice.com/html/winter_solstice.html

Kids Astronomy
http://www.kidsastronomy.com/

Zoom Astronomy
http://www.enchantedlearning.com/subjects/astronomy/

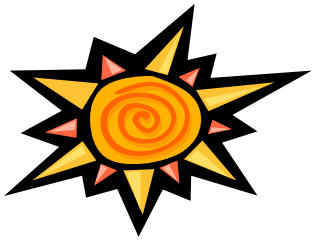
Books You May Want to Read (Hint: go to the TEL Database, What Do I Read Next and choose to do a Custom Search. Under Subject, choose astronomy and then hit Search.)

The Winter Solstice by Ellen Jackson; illustrated by Jan Davey Ellis
Presents facts and folklore about the shortest day of the year, a day that has been filled with magic since ancient times

Sunshine Makes the Seasons by Franklyn M. Branley; illustrated by Giulio Maestro
Describes how sunshine and the tilt of the earth's axis are responsible for the changing seasons

Children's Night Sky Atlas by Robin Scagell
Sky maps and constellations explained

The kids book of the night sky by Ann Love & Jane Drake; illustrated by Heather Collins
Using a written text, myths and legends, jokes, and activities, the authors present an excellent introduction to the many wonders of the night sky throughout the seasons



Winter Solstice and the Night Sky

The Cobble Street cousins: special gifts by Cynthia Rylant; illustrated by Wendy Anderson Halperin
Nine-year-old cousins Rosie, Lily, and Tess spend their winter vacation learning to sew with their neighbor Mrs. White and preparing for a special winter solstice dinner with Aunt Lucy and her boyfriend Michael

Exploring the Night Sky: The Equinox Astronomy Guide for Beginners by Terence Dickinson ; principal illustrations by John Bianchi

To Find More about Astronomy Topics

In TEL, go to Kids InfoBits or Junior Edition - K12 and use the following search strategies:

Solstice	Solar	Seasons	Equinox
Stars	Planets	Equinox	Constellations
Eclipse	Solar system	Galaxy	Moons
Nebula	Orbit	Asteroid	Comet

Just for Fun

The following Exploratorium webpage will walk you through creating a Sun Clock. Have Fun!
http://www.exploratorium.edu/science_explorer/sunclock.html

The National Science Teachers Association offers this exercise on their astronomy website
http://www.nsta.org/awsday

Objective

To compute the change in the amount of daylight from day to day.

Time allotment

Students need about 10 minutes each day, several days in a row, to write down the hours of sunrise and sunset, calculate the length of the daylight hours, and figure the rate of change in daylight hours for their area. If possible, plan to do the activity before and after winter solstice.

Procedure

1. Using the data from the weather report in the daily newspaper, write down the time of sunrise and the time of sunset, and figure the length of the daylight hours in your area (count the whole hours and then add together the number of minutes left until the next hour and the number of minutes after that hour).
2. Enter this information in a table. Enter data in the table for several days in a row. Subtract the length of the previous day from the length of each new day (or vice versa) to determine how much the amount of daylight has lengthened or shortened. Enter the rate of change per day in the last column of the table.
3. Repeat these calculations later in the school year.